

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in light of the present amendments and following discussion, is respectfully requested.

Claims 28-53 are pending; Claims 1-27 are canceled; and Claims 28-53 are newly added herewith. As newly added Claims 28-53 correspond to the subject matter of original Claims 1-27, with only minor amendments thereto, it is respectfully submitted that no new matter is added by this amendment.

In the outstanding Office Action, Claims 6, 8, and 10-18 were objected to; Claims 1-9 and 19-21 were rejected under 35 U.S.C. § 102(e) as anticipated by Mauro (U.S. Pat. No. 6,122,384); Claims 10-21 were rejected under 35 U.S.C. § 103(a) as unpatentable over Gao et al. (U.S. Pat. No. 6,604,070, hereafter Gao) in view of Mauro; Claims 22 and 23 were rejected under 35 U.S.C. § 103(a) as unpatentable over Mauro in view of Ashley (U.S. Pat. No. 5,659,622); and Claims 24-27 were indicated as allowed.

Applicants acknowledge with appreciation the indication that Claims 24-27 are allowed. The subject matter of Claims 24-27 may be found in Claims 46-49. Accordingly, it is respectfully submitted that Claims 46-49 are in condition for allowance.

With regard to the objection to Claims 6, 8, and 10-18, Claim 33 corresponds to the subject matter of Claims 6 and 7, Claim 34 corresponds to the subject matter of Claims 8 and 9, and Claims 35-41 correspond to the subject matter of Claims 10-18. It is respectfully submitted that this objection has been overcome by new Claims 33-41. It is therefore respectfully requested that this objection be withdrawn.

With regard to the rejection of Claims 1-9 and 19-21 under 35 U.S.C. § 102(e) as anticipated by Mauro, that rejection is respectfully traversed.

The subject matter of Claims 1-9 is presently reflected in Claims 28-34. The subject matter of Claims 19-21 is present as Claims 42 and 43. Independent Claims 28 and 29, from

which Claims 30-34 depend recite, in part, a speech encoder, which has a plurality of different speech coding rates each corresponding to one of the different noise suppression algorithms, configured to encode the suppressed speech signal using one of the different speech coding algorithms, wherein the noise suppresser selects a noise suppression algorithm being preset corresponding to the used speech coding algorithm or rate.

Mauro relates to a noise suppression system method. Mauro describes that speech detector 208 comprises rate decision element 212, which selects the data rate of the input signal from a predetermined set of data rates.¹ Mauro further describes that because the rate of a frame is dependent on the speech activity during a time frame, determining the rate will provide information on whether speech is present or not.² According to Mauro, speech decision element 216 generates a decision on whether or not speech is present in the input signal based on its inputs. The decision on the presence of speech will determine if a noise energy estimate update should be performed.³ According to Mauro, speech decision element 216 determines that speech is not present, and that the noise estimate should be updated, if the rate is the minimum rate of the variable rates.⁴ If the rate is not minimum according to Mauro, then speech decision element 216 will determine that the frame contains speech, and no noise estimate update is performed.⁵

However, Mauro does not alter the noise suppression characteristics of its system if speech is determined to be present in the input signal. In fact, the noise estimate of Mauro is only updated when speech is determined not to be present. Moreover, unlike Claims 28 and 29, the speech coding algorithm of Mauro is not disclosed or suggested as being interrelated with the noise suppression algorithm.

¹ Mauro, col. 5, lines 58-60.

² Id. at col. 6, lines 14-25.

³ Id. at col. 7, lines 45-50.

⁴ Id. at col. 8, lines 19-21.

⁵ Id. at lines 41-44.

Simply put, Mauro does not disclose or suggest a speech encoder, which has a plurality of different speech coding algorithms each corresponding to one of the different noise suppression algorithms, configured to encode the suppressed speech signal using one of the different speech coding algorithms, wherein the noise suppressor selects a noise suppression algorithm being preset corresponding to the used speech coding algorithm or rate, as recited in Claims 28 and 29. Accordingly, it is respectfully submitted that independent Claims 28 and 29 patentably distinguish over Mauro.

Claim 42, from which Claim 43 depends, recites a noise suppressor, which has a first noise suppression algorithm corresponding to the hands-free function and a second noise suppression algorithm corresponding to a non-hands-free function, configured to suppress background noise contained in a speech signal; and a switch configured to select the first or second noise suppression algorithm in accordance with the used function.

Mauro describes that a microphone 102 may be the hands-free microphone of the vehicle speakerphone option to a cellular communication system.⁶

However, the Office Action fails to address, and Mauro does not disclose or suggest, the noise suppressor recited in Claim 42. It is therefore respectfully submitted that Claims 42 and 43 patentably distinguish over Mauro.

With regard to the rejection of Claims 10-21 under 35 U.S.C. § 103(a) as unpatentable over Gao in view of Mauro, that rejection is also traversed. Claims 10-21 correspond to the subject matter of Claims 35-43.

As admitted in the Office Action at page 10, Gao fails to disclose or suggest the noise suppressor of newly added Claims 35 and 36. The Office Action attempts to remedy this admitted deficiency by relying upon Mauro.

⁶ Id. at col. 4, lines 12-15.

As explained above, Mauro fails to disclose or suggest that a noise suppressor selects a noise suppression algorithm being preset corresponding to the used speech decoding algorithm, or that the noise suppressor selects a noise suppression algorithm being preset corresponding to the used speech decoding rate, as recited in Claims 35 and 36.

Therefore, as neither Gao nor Mauro, either alone or in combination, discloses or suggests the features of Claims 35 and 36, from which Claims 37-43 depend, it is respectfully submitted that Claims 35-43 patentably distinguish over the applied combination of Gao and Mauro, and it is respectfully requested that this rejection be withdrawn.

Moreover, it is respectfully submitted that there is no basis in the teachings of either Gao or Mauro to support the applied combination. Certainly, the Office Action fails to cite to any specific teachings within either reference to support the applied combination. It is therefore respectfully submitted that the combination of Gao and Mauro is based upon hindsight reconstruction, and is improper.

With regard to the rejection of Claims 22 and 23 under 35 U.S.C. § 103(a) as unpatentable over Mauro in view of Ashley, that rejection is also traversed. The subject matter of original Claims 22 and 23 is presently recited in Claims 44 and 45. Claims 44 and 45 recite a speech encoder and a noise suppressor similar to the speech decoder and noise suppressor of Claims 28 and 29.

Mauro fails to disclose or suggest a speech encoder, which has a plurality of different speech encoding algorithms, each corresponding to one of the different noise suppression algorithms, configured to encode the suppressed speech signal using one of the different speech coding algorithms, wherein the noise suppressor selects a noise suppression being preset corresponding to the used speech coding algorithm or the used speech coding rate.

As Ashley is not relied upon for the features identified as deficient within Mauro, Ashley is not substantively addressed herewith.

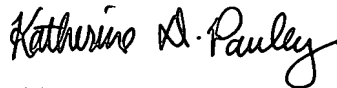
Therefore, it is respectfully submitted that Claims 44 and 45 patentably distinguish over the applied combination of Mauro and Ashley.

Moreover, it is respectfully submitted that there is no basis in the teachings of either Mauro or Ashley to support the applied combination. The Office Action certainly fails to cite to any specific teachings within either Mauro or Ashley to support this combination. It is therefore respectfully submitted that the combination of Mauro and Ashley is based upon hindsight reconstruction, and is improper.

Consequently, in view of the foregoing discussion and present amendments, it is respectfully submitted that this application is in condition for allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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